New York State Integrated Pest Management Program

1998 Project Report to the New York State IPM Program

Evaluating Management Options for European Red Mite and Sevin-resistant Grape Leafhopper, and Post-emergent Weed Management Demonstration in Finger Lakes Vineyards.

Principle Investigators: *T. Martinson, Regional Extension Specialist, Finger Lakes Grape Program, T. Weigle, Senior Area Extension Educator NYS IPM Program*

Collaborators: *G. English-Loeb, Department of Entomology, NYSAES; Wayne Wilcox, Dept. Plant Pathology, NYSAES*

Summary. This IPM Implementation Project had several objectives aimed at providing Finger Lakes region grape growers with useful, timely information on pest management and providing options for dealing with emerging pest management problems. European red mite and insecticide-resistant grape leafhopper are two current insect problems. For European red mite, an insecticide trial evaluated the use of dormant and summer applications of spray oil on spider mites, for which the only current option is conventional miticides. Approaches currently used by apple growers were tested. Dormant oil, highly effective in apples, had no effect on spider mites in grapes. Results of winter egg counts on dormant grape canes and trunks showed that many winter eggs were deposited under loose bark, and probably were not in contact with spray residues. Early-season applications of stylet oil showed promise for mite control. One prebloom application provided temporary suppression, while 3 prebloom applications supressed mites through the end of August. A second trial of Lannate and Provado, showed that both materials suppressed leafhoppers resistant to carbaryl (Sevin), but Provado suppressed leafhopper numbers for much longer than Lannate. This suggests that growers applying the inexpensive material, Lannate, may have to make 2 applications, while growers applying the more expensive Provado will only need to make one application. Provado, although more expensive, might be a better value for growers, and more compatible with biological control organisms than Lannate. Post-emergent weed control programs provided equivalent weed control to those using pre-emergent herbicides.

Funding from the IPM program allowed us to collect timely pest information weekly from 8 Finger Lakes vineyards. Results were incorporated into twice-weekly pest updates distributed from April 8 to Mid-September via electronic mail and recorded telephone messages (Code-a-Phone). Grower feedback on the electronic updates was positive - it improved timeliness of the messages, and helped growers time insecticide and fungicide applications better, thus using these inputs more efficiently. The E-mail messages also provide a record of pest occurrence tied to growing-degree days (heat unit accumulation) and vine development, which will be used in next year's messages. Depth of the information presented would not have been possible without the scout provided by IPM program funding.

For a printed copy of the entire report, please contact the NYS IPM office at:

IPM House
630 W. North St.
New York State Agricultural Experiment Station
Geneva NY 14456
315-878-2353